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Advanced Virtual Reality Technology in the Field of Education

Surya S[1], Sagaya Aurelia[2*]
[1]PG Student, [2]Assistant Professor
[1,2]Department of Computer Science, Christ University, Bangalore, Karnataka, India
Email: **sagaya.aurelia@christuniversity.in*
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Abstract

The main objective of this paper is to improvise the VR framework in the field of education in which we can add additional features that help the students to learn subjects in a more interesting and interacting way, which makes learning more effective for the students and they experience the subject in a virtual world.

Keywords: *Multi-foreseen, proximity, virtual information, VR framework*

INTRODUCTION

Virtual reality technology is an insightful three-dimensional computer made environment happening inside a replicated circumstance. It combines in a general sense sound-related and visual analysis, anyway may moreover allow various types of unmistakable info like haptic. This striking condition can resemble this present reality or an animated environment. These frameworks of VR that layers virtual information in a mobile phone with head mounted display or specialized head mounted display specially designed for empowering the customer to see a virtual world in order to interact and learn [1,2].

Current VR development most typically uses computer created reality head mounted display or multi-foreseen conditions, the environment created is mostly on the physical situational environments or experiments, that provides the users an experience of realistic engagement with the surroundings, sounds and diverse vibes that turns a person's physically present experience in a virtual or non-existent condition [3,4]. A person can experience VR produced reality using head mounted display and can look around in almost 360 degree and engage and interact with the virtual world environment. The effect is experienced only with the head mounted display wherethe user can see through the display and experience in like manner that is made through by giving the user an interaction with the virtual world with sound effects as well. These VR frameworks are enabled through vibrations and sensations also where the user experiences reality this are mostly incorporated widely in video gaming applications.

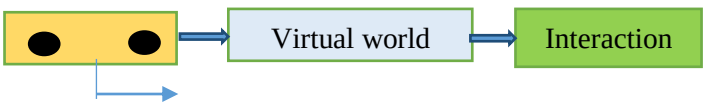

Figure 1: *Head mounted display.*

As shown in the Fig. 1, the essential subject of computer-generated reality is re-enacting the vision. Each headset plans to consummate their way to deal with making a vivid 3D condition. Each VR headset sets up a screen before eyes along these lines, wiping out any connection with this present reality [5].

VR and Education

Training is one of the territories which have evolved virtual reality (VR) for educating and learning circumstances. The benefit of this is that it empowers expansive gatherings of roles to collaborate with one another and in a three-dimensional environment. It can display complex information in an open method to understand, which is both fun and effective to learn. In addition, these roles and environment that is created in the three-dimensional environment gives the students a new experience of how we can learn subjects by breaking the stereotype or the usual system of education for the upcoming generation. The main objective of Virtual Reality in training is to make examining and learning progressively powerful and effective [6,7]. VR recreations give a profound comprehension of the material by a student with its further application, in reality as shown in Fig. 2.

Figure 2: *VR in education.*

Virtual reality technology is not suitable for all the age group of peoples, as it is not comfortable to teach in their innovative way and understand in their own way, at present though students are very much interested in learning in VR, it is also very much necessary to create such an environment to get used for the students as well as for the teachers. Therefore, the intention is to improvise a more effective and compatible VR framework that suits for the user's comfort [8-10].

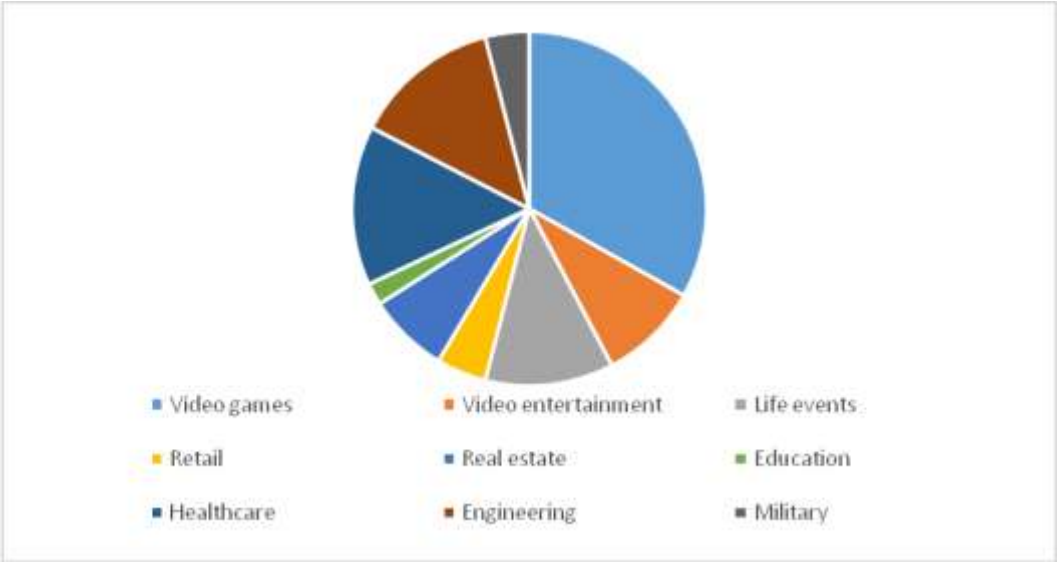

Figure 3: *Prediction of VR usage in 2025.*

As shown in the Fig. 3, pie chart represents the prediction of 2025 base case VR software assumptions by usecase in various fields. Therefore, the virtual reality can make a big change in the way of learning that grabs the attention of students

in a more effective way in learning the subjects.

CONCLUSION

The scope and intention of this research is to improvise the virtual reality apps that can suit all age group of people, which can help in teaching and understanding the concepts in a more innovative way. The significance of this research is that we can add or improvise additional features like adding syllabus in teaching according to the syllabus, allowing the students to have an hands on virtual reality experience to do practical experiments which will help the students to rectify their errors and correct it and bring out more interesting and innovative way of teaching concepts.

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